European Food Safety Authority; Outcome of the Public consultation on the Draft Opinion of the Scientific Panel on Dietetic Products, Nutrition, and Allergies (NDA) on establishing Dietary Reference Values for water

EFSA Publication

Publication date:
2010

Document Version
Publisher's PDF, also known as Version of record

SCIENTIFIC REPORT OF EFSA

Outcome of the Public consultation on the Draft Opinion of the Scientific Panel on Dietetic Products, Nutrition, and Allergies (NDA) on establishing Dietary Reference Values for water[1]

European Food Safety Authority[2, 3]

European Food Safety Authority (EFSA), Parma, Italy

SUMMARY

On 11 April 2008, the EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) endorsed a draft Opinion on Dietary Reference Values for water to be released for public consultation. This Scientific Report summarises the comments received through the public consultation and outlines how these were taken into account in the final opinion.

EFSA received 44 contributions from 6 interested parties (individuals, non-governmental organisations, industry organisations, academia and national assessment bodies). After a meeting with national experts on Dietary Reference Values which was held in September 2009, three additional comments on the draft Opinion on DRVs for water were received from three Member States.

The main comments which were received during the public consultation related to: the definition of drinking water, possible adverse health effects of excessive consumption of sugar sweetened beverages and/or electrolyte beverages, the influence of caffeine on water balance, and the Adequate Intake of water for the elderly which was proposed.

All the public comments received and comments from Member States that related to the remit of EFSA were assessed and the Opinion on Dietary Reference Values for water has been revised taking relevant comments into consideration.

1 On request from EFSA, Question No EFSA-Q-2009-00921, issued on 01 March 2010.

2 Correspondence: NDA@efsa.europa.eu

3 Acknowledgement: EFSA wishes to thank the members of the Working Group on Population Reference Intakes for the preparation of this EFSA scientific output: Carlo Agostoni, Jean-Louis Bresson, Jean-Michel Chardigny, Susan Fairweather-Tait, Albert Flynn, Ambroise Martin, Monika Neuhäuser-Berthold, Hildegard Przyrembel, John Joseph Strain, Inge Tetens, Daniel Tomé and EFSA's staff member Silvia Valtueña Martínez for the support provided to this EFSA scientific output.

Suggested citation: European Food Safety Authority; Outcome of the Public consultation on the Draft Opinion of the Scientific Panel on Dietetic Products, Nutrition, and Allergies (NDA) on establishing Dietary Reference Values for water. EFSA Journal 2010; 8(5):1505. [26 pp.]. doi:10.2903/j.efsa.2010.1505. Available online: www.efsa.europa.eu

TABLE OF CONTENTS

BACKGROUND

On 11 April 2008, the EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA) endorsed a draft Opinion on Dietary Reference Values for water to be released for public consultation.

The scientific advice on nutrient intakes is important as the basis of Community action in the field of nutrition; for example such advice has in the past been used as the basis of nutrition labelling. The Scientific Committee for Food (SCF) report on nutrient and energy intakes for the European Community dates from 1993.

The European Commission has asked EFSA to review and if necessary update such advice to ensure that the Community action in the area of nutrition is underpinned by the latest scientific advice. To this end the EFSA has been requested to consider the existing Population Reference Intakes for nutrients and certain other dietary components.

Furthermore, and in order to communicate effectively on nutrition and on healthy diets to the public at large, it is generally more appropriate to express recommendations for the intake of individual nutrients or substances in food-based terms. To this end EFSA has also been asked by the European Commission to provide assistance on the translation of nutrient based dietary recommendations for a healthy diet into food-based recommendations intended for the European population as a whole.

In line with EFSA's policy on openness and transparency and in order for EFSA to receive comments from the scientific community and stakeholders on its work, EFSA engages in public consultations on key issues. The work on Dietary Reference Values (DRVs) including food-based dietary guidelines is considered to be such an issue. Accordingly, the draft Opinion on DRVs for water was released for public consultation for four months (from 8 August until 15 December 2008) on EFSA's homepage[4]. Stakeholders were informed and invited to submit comments.

Together with other draft Opinions on Dietary Reference Values, the draft Opinion on DRVs for water was also discussed on a National Expert Meeting with Member States on Dietary Reference Values held in Barcelona on 7 and 8 September 2009, with a deadline for written comments by 30 September 2009.

EFSA has committed to publish the comments received during the public consultation as well as a short report on the outcome of the consultation, taking also into account comments received by Member States in the commenting period after the National Expert Meeting.

COMMENTS RECEIVED

At the end of the public consultation period in December 2008 EFSA had received 44 contributions from 6 interested parties (individuals, non-governmental organisations, industry organisations, academia and national assessment bodies). After the National Expert Meeting on Dietary Reference Values in September 2009, three additional comments on the draft Opinion on DRVs for water were received from three Member States. All comments received were scrutinised by the NDA secretariat and subsequently compiled with reference to the contributor and the section of the draft Opinion to which the comment referred (see Appendix). Comments submitted formally on behalf of an organisation appear with the name of the organisation. The comments received by Member States during the National Expert Meeting are published in the minutes of that meeting on the EFSA website.

[4] http://www.efsa.europa.eu/EFSA/efsa_locale-1178620753812_1211902045161.htm

SCREENING AND EVALUATION OF COMMENTS RECEIVED

1. General comments

In general the comments were constructive and aimed to help improving the draft Opinion. It was noted that several contributions copied or reiterated arguments brought forward already by other organisations.

The majority of the comments supported the general view of the Opinion and of the various sections. Some comments congratulated EFSA for the good quality of the document.

This report provides a summary of the main issues and their consideration.

2. Specific comments

The main issues addressed in the comments received are summarised below.

Recommendation of preferable type of water: Several comments related to the higher importance of drinking water versus that of beverages, juices, and other drinks and requested recommendations for preferable sources of water, particularly for children.

Sugar sweetened beverages: Several comments pointed out the relationship between excessive consumption of sugar-containing beverages and overweight/obesity, diabetes mellitus, insulin resistance and the metabolic syndrome, and provided literature compilations related to these aspects.

Electrolyte beverages containing sodium were considered in some comments as contributing to the development of hypertension.

Caffeine as constituent was considered to be overestimated in its effects on water balance at habitual and regular levels of consumption.

The Adequate Intake of water for the elderly was claimed not to be sufficiently justified in the Opinion.

Misunderstanding of the terms for DRVs through confusing them with health guidance values for **e.g. additives and contaminants.**

INCORPORATION OF THE COMMENTS IN THE OPINION

The EFSA NDA Working Group on Population Reference Intakes (PRI) was presented with the compilation of comments and discussed them at a dedicated meeting. Many of the comments were appropriate and aimed to enhance the scientific quality and clarity of the document. These comments were taken into account and the document was revised accordingly as follows:

Recommendation of preferable type of water: The Panel has modified the original definition of drinking water to include both tap and bottled water. Wherever dietary sources of water are mentioned in the text, drinking water is put first to underline its importance.

Sugar sweetened beverages/ Electrolyte beverages: The Panel considered that, although some of the comments on the different effects of sugar, electrolyte and caffeine containing beverages could be correct, it was not the task of the Panel to provide guidance on the beverages to be preferred. This would be part of food-based dietary guidelines (FBDG, see section 6.1). Moreover, such effects are already mentioned in section 5.1.2.1 of the Opinion.

Caffeine: The Panel has modified the description of the effects of caffeine on water excretion and regulation (section 5.1.2.1 of the Opinion).

The Adequate Intake of water for the elderly: The Panel has modified the text on water requirements for the elderly to better explain the basis for this conclusion (section 6.7 of the Opinion).

EFSA wishes to thank all stakeholders for their contribution.

GLOSSARY AND ABBREVIATIONS

DRV	Dietary Reference Value
EFSA	European Food Safety Authority
FBDG	Food-based dietary guidelines
PRI	Population Reference Intakes
SCF	Scientific Committee on Food

APPENDIX

COMMENTS RECEIVED ON THE DRAFT OPINION RELATED TO DIETARY REFERENCE VALUES FOR WATER DURING THE PUBLIC CONSULTATION PERIOD

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
British Nutrition Foundation	Conclusions	Dear Sir, The British Nutrition Foundation (BNF) is a not-for-profit organisation with charitable status that promotes the wellbeing of society through the impartial interpretation and effective dissemination of scientifically based knowledge and advice on the relationship between diet, physical activity and health. It works in partnership with academic and research institutes, the food industry, educators and government. Comments on the consultation on the EFSA draft on Dietary Reference Values for water: The British Nutrition Foundation (BNF) is pleased to have the opportunity to comment on the draft document, discussing the development of DRVs for water intake, as prepared by the EFSA Panel on Dietetic Products, Nutrition and Allergies. BNF has read with great interest the panel's proposals. We think that the panel has generated a valuable document, which will be a good basis for the development of DRVs for water, and we generally agree with the suggestions made in this document. We believe that the proposal to develop DRVs for water intake could be very useful and will help health professionals to provide guidance to the public in an area that is often the cause of much confusion. However, the Panel must ensure that any recommendations are explained clearly as it is very easy for people to misinterpret the guidance; people may not be aware that the 'water' recommendation refers to fluids from all sources, including drinks other than water as well as food. Also, care should be taken when setting the recommendations as water requirements can vary to a great extent, depending on different factors. Yours thankfully, Prof. Judith Buttriss Director General, The British Nutrition Foundation. Dr. Elisabeth Weichselbaum

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		Nutrition Scientist, The British Nutrition Foundation.
Danone Research	1. Introduction	Page 1 Line 16: DANONE RESEARCH fully supports the facts that water from all beverages and foods contributes to water intake. This is particularly true for beverages as they are mainly composed of water. However, the extent to which different beverages contribute equally to hydration is still debatable. Furthermore, the extensive literature on the possible consequences of excessive sugar sweetened beverages consumption on excess energy intake, overweight and obesity and long term health consequences, justifies to clearly indicate that all beverages are not equivalent in relation with their long term health consequences. Therefore, DANONE RESEARCH, proposes to clearly state in the summary of the document that drinking water, spring water and natural mineral water, should be preferred as the healthiest beverage to satisfy Water ADI's, particularly in sensitive populations like children. Such a position as already been taken by several member states in their national prevention or health programs: France and Belgium with their PNNS, United Kingdom with the Food Standards Agency, Germany, Italy, The Netherlands, Spain, …
Danone Research	5. Criteria (endpoints) on which to base recommendations for water intake	Page 34 Line 978: other beverages than water could bring not only water to the body, but also additional ingredients and molecules that could have side effects depending on the intake level. This has driven the US Scientific community and the Mexican Health authorities to establish beverage guidelines (Popkins et al., 2006, Rivera et al., 2008). This is the case of caffeinated and alcoholic beverages, as discussed in section 5.1.2.1. of this document. Furthermore, the effect or consequences beyond hydration of some beverages regarding their long term potential consequences on health should be considered. This is the case of beverages containing sodium in relation with the concern on the development of hypertension as discussed again in section 5.1.2.1. DANONE RESEARCH recommends considering also the case of excessive consumption of sugar sweetened beverages for their potential effects on energy intake, overweight, obesity and its chronic consequences on health. This should be considered particularly for very sensitive or exposed groups of populations like children and adolescents. The contribution of high intakes of sugars, in the form of beverages, to excess calorie intake has been extensively studied in the US and Mexico. In the US, Nielsen and Popkin (2004) have shown that the consumption of calories from sweetened beverages has increased by 135% between 1977 and 2001. In Mexico, the consumption of calories per capita from high sugar containing beverages has increased between 1999 and 2006 by 125% and 209%, in adolescents and adults respectively (Barquera et al., 2008, Rivera et al., 2008). This higher consumption has led to an increased calorie intake, particularly in children as demonstrated by several authors (Harnack et al., 1999, Ludwig et al., 2001, Mrdjenovic et al., 2003, Van Wylmelbeke et al., 2004). In children and adolescents, the relation between the high intakes of sugar and excessive weight gain or the risk of obesity has been shown by

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		different authors (Ludwig et al., 2001, Dennison et al., 1997, Forshee and Storey, 2003, Gillis and Bar-Or, 2003, Apovian, 2004, Ariza et al., 2004, Berkey et al., 2004, Phillips et al., 2004, Nicklas et al., 2004, Welsh et al., 2005, Malik et al., 2006, O"Connor et al., 2006, Striegel-Moore et al., 2006, Tam et al., 2006, Warner et al., 2006, Dubois et al., 2007, Ochoa et al., 2007, Sanigorski et al., 2007, Libuda et al., 2008, Forshee et al., 2008). This is also clearly confirmed by high quality and recent interventional studies (Ebbeling et al., 2006, Taylor at al., 2007 and Sichieri et al., 2008). These results showed also that reducing sugar added beverage is an efficient strategy to reduce excessive BMI in children. This possibility has also been demonstrated in adult women (Klohe et al., 2007, Stookey et al., 2007). Stookey et al., 2008 have demonstrated that replacing caloric sweetened beverages by drinking water reduces energy intake and as a consequence, help to lose weight. The association between excessive intakes of sugars in the form of sugar sweetened beverages and weight gain in adults has also been clearly established (Schulze et al., 2004, Bes-Rastrollo et al., 2006). The positive relation between high intakes of sugars in the form of sugar sweetened beverages and occurrence of diabetes has been well documented through observational studies (Paynter et al., 2006, Montonen et al., 2007, Bazzano et al., 2008, Palmer et al., 2008. Observational studies Yoo et al. 2004, Davis et al. 2005, Ventura et al., 2006, Dhingra et al., 2007, Lutsey et al., (2008) tend to show positive relation between sugar sweetened beverages and insulin resistance as well as metabolic syndrome.
Danone Research	5. Criteria (endpoints) on which to base recommendations for water intake	Page 34 Line 985 Overall and despite some debates still going on, the work done by the scientific community on health consequence of excessive intakes of sugars in the form of sugar sweetened beverages tends to become significant over the last years. The positive relation between the high consumption of these drinks and over-weight, obesity, diabetes, insulin resistance and metabolic syndrome has been clearly shown on populations which are heavy consumers like in the USA and Mexico. This justifies the prevention programs already applied by several European countries to promote pure water as a preferential source of water instead of other kinds of beverages.
EUROPEAN FEDERATION OF BOTTLED WATER	1. Introduction	Introduction, page 6, line 183 EFBW fully supports EFSA Panel: “water was not specifically mentioned in the terms of reference provided by EC… water should be included in the task because water and adequate hydration of the body is essential for health and life”.
EUROPEAN FEDERATION OF BOTTLED	1. Introduction	Summary, page 1, line 16 The Panel indicated that water intake should include water from beverages, drinking water, moisture content of food and water

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
WATER		produced by oxidative processes in the body. This approach should be supported as most fluids are mainly composed of water and therefore contribute to water intake. However, the extent to which different kinds of beverages can contribute to hydration is still debatable. If all fluids contribute to water intake, they can not be considered equally to satisfy water ADI's" and consequently natural mineral water, spring water and drinking water should be promoted as the preferential healthiest fluid to satisfy the water needs. Therefore, EFBW would recommend indicating "Water is consumed from different sources, which include preferably water (natural mineral water, spring water and drinking water), beverages, moisture content of foods, and water produced by oxidative processes in the body" instead of "Water is consumed from different sources, which include beverages, drinking water, moisture content of foods, and water produced by oxidative processes in the body"
EUROPEAN FEDERATION OF BOTTLED WATER	1. Introduction	Summary, page 2, line 38-39 EFBW would recommend indicating "…the reference values for total water intake should include water from beverages, preferably water: natural mineral water, spring water and drinking water and from food moisture" instead of "…the reference values for total water intake should include water from beverages of all kind, including drinking and mineral water, and from food moisture"
EUROPEAN FEDERATION OF BOTTLED WATER	1. Introduction	Summary, page 2, line 57 EFBW would ask EFSA to make clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
EUROPEAN FEDERATION OF BOTTLED WATER	2. Definition/category	Section 2 Definition, page 6, line 197 EFBW would ask EFSA to include a paragraph on water that makes clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p
EUROPEAN FEDERATION OF BOTTLED WATER	3. Intake data	Section 3.2 Dietary intake, page 21, line 747 EFBW supports this work aims at defining ADI's (Adequate Daily Intake) of water for different groups of population.
EUROPEAN FEDERATION OF BOTTLED WATER	4. Overview on available dietary recommendations	Line 809 Belgium. EFBW suggests adding: * CSH-Belgium highlighted that "in our temperate climate, it is enough to drink 1.5 liters of water per day" https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/ABOUTUS1_MENU/INSTITUTIONSAPPARENTEES1_MENU/ HOGEGEZONDHEIDSRAAD1_MENU/MEDEDELINGEN1_MENU/MEDEDELINGEN1_DOCS/CSH%207145-2%20_BROCHURE_RECOMMANDATIONS_NUTR_2006_FR.PDF * PNNS-Belgium precised that "water is the lonely beverage which is really essential" https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/MIJNGEZONDHEID1_MENU/PRODUITSDECONSOMMATION1_ MENU/ALIMENTATION1_MENU/PLANNUTRITIONSANTE1_MENU/ALIMENTATIONSAINE1_MENU/ALIMENTATIONSAINE1_DOCS/GUIDE_GENERAL.PDF * Belgium National Nutritional and Health Plan (2005-2010) highlighted that "water is not only a vital nutrient, it is also the lonely beverage which is physiologically essential", as well as "water must be proposed as the first choice of beverage, especially for young children". https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/MIJNGEZONDHEID1_MENU/PRODUITSDECONSOMMATION1_ MENU/ALIMENTATION1_MENU/ALIMENTATION1_DOCS/TEXTE%20SCIENTIFIQUE%20PNNS_0.PDF

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
EUROPEAN FEDERATION OF BOTTLED WATER	4. Overview on available dietary recommendations	Line 814 Germany: EFBW proposes adding: * German Food and Agriculture Authority (Baden-Württemberg) underlined that "not all beverages can be recommended for children. The ideal is drinking or mineral water" http://www.mlr.baden-wuerttemberg.de/Staatssekretaerin_Friedlinde_Gurr_Hirsch_MdL_Eine_ausreichende_Fluessigkeitszufuhr_erhaelt_die_Konzentrationsfaehigkeit_von_Schulkindern/27550.html
EUROPEAN FEDERATION OF BOTTLED WATER	4. Overview on available dietary recommendations	Line 823 France: EFBW suggests adding: * AFSSA highlighted that: "water is the lonely beverage absolutely vital for our body" A. Martin. Apports nutritionnels conseillés pour la population française. Ed. TEC&DOC, 3ème, 2001 * PNNS-France underlined that: "the beverage that your body prefers is water", "during lunch and dinner, the beverage is water, only water", http://www.mangerbouger.fr/menu-secondaire/manger-mieux-c-est-possible/les-9-reperes-essentiels/eau-a-volonte.html * EPODE-France precised that:"it is necessary that the main source of daily hydration is water, as it is part of a balanced diet", "water is the lonely original and universal beverage", "drink water without moderation", "the essential gesture: water by nature" http://www.epode.fr/pdf/communiques/cpeau.pdf * "only water is essential" Chevalier L. Nutrition: principes et conseils. Paris: Masson Ed. 2, 2005, 260p

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
EUROPEAN FEDERATION OF BOTTLED WATER	4. Overview on available dietary recommendations	Line 857 EFBW suggests to review data from UK: * Food Standard Agency highlighted that: "water is the best choice for quenching your thirst", "one of the 8 tips for eating well: drink plenty of water" http://www.eatwell.gov.uk/healthydiet/nutritionessentials/drinks/drinkingenough/?lang=en http://www.eatwell.gov.uk/healthydiet/nutritionessentials/drinks/waterandsoftdrinks/?lang=en EFBW suggests to review data from Italy: * INRAN (Instituto Nazionale di Ricerca per gli alimenti e la Nutrizione) highlighted that "water balance needs to be maintained essentially with drinking or bottled water" * INRAN also precised that" other beverages need to be consumed with moderation", "drink plenty of water during the day" http://www.inran.it/INRAN_LineeGuida.pdf EFBW suggests to review data from Spain: * Ministry of Health through NAOS program highlighted that: "water: an essential beverage", "water is a vital beverage to maintain a balanced diet", to To control children's consumption of sugar sweetened beverages will help to have a healthy diet, as it is important that children are thirsty of water" http://www.naos.aesan.msc.es/naos/ficheros/investigacion/Come_sano_y_muevete.pdf http://www.naos.aesan.msc.es/csym/nutricion_saludable/recomendaciones/recomendacion00004.html
EUROPEAN FEDERATION OF BOTTLED WATER	4. Overview on available dietary recommendations	Section 4, Overview on available dietary recommendations, pages 25-26 In addition to the compilation of available data from different countries, EFBW suggests to include a compilation of nutritional recommendations already applied by several European countries to promote natural mineral water, spring water and drinking water as a preferential source of water instead of other kinds of beverages.
EUROPEAN FEDERATION OF BOTTLED WATER	5. Criteria (endpoints) on which to base recommendations for water intake	Section 5.1.2.1., Dietary factors, pages 34-35, line 978 EFBW suggests to add that the beverages that contain just water are: natural mineral water, spring water and drinking water.Other beverages bring not only water to the body, but also additional ingredients that have good or side effects depending on the intake level. The effect or consequences beyond hydration of some beverages regarding their long term potential consequences on health should be reviewed. EFBW would recommend considering the case of sugar in the form of some beverages, when consumed in excess, for their effects on energy intake. 1 Popkin et al. Am J Clin Nutr. 2006; 83: 529-542 2 WHO, 2007. The challenge of obesity in the WHO European Region and the strategies for response

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		3 Ludwig et al. Lancet. 2001; 357, 505-508 4 Dennison et al. Pediatrics. 1997; 99, 15-22 5 Forshee et al. Int J Food Sci Nutr. 2003; 54, 297-307 6 Gillis et al. J Am Coll Nutr. 2003; 22, 539-545 7 Apovian, C.M. JAMA. 2004; 292, 978-979 8 Ariza et al. J Urban Health. 2004 ; 81, 150-161 9 Berkey et al. Obes Res. 2004 ; 12, 778-788 10 Phillips et al. Obes Res. 2004 ; 12, 461-472 11 Nicklas et al. J Am Diet Assoc. 2004 ; 104, 1127-1140 12 Welsh et al. Pediatrics. 2005; 115, e223-229 13 Malik et al. Am J Clin Nutr. 2006; 84, 274-288 14 O"Connor et al. Pediatrics. 2006; 118, e1010-1018 15 Striegel-Moore et al. J Pediatr. 2006; 148, 183-187 16 Tam et al. Int J Obes. 2006; 30, 1091-1093 17 Warner et al. Obesity. 2006; 14, 1966-1974 18 Dubois et al. J Am Diet Assoc. 2007; 107, 924-934 19 Ochoa et al. Nutrition. 2007; 23, 379-384 20 Sanigorski et al. Public Health Nutr. 2007; 10, 152-157 21 Libuda et al. Br J Nutr. 2008; 99, 1370-1379 22 Forshee et al. Am J Clin Nutr. 2008; 87, 1662-1671 23 Ebbeling et al. Pediatrics. 2006; 117, 673-680 24 Taylor et al. Am J Clin Nutr. 2007; 86, 735-742 25 Sichieri et al. Public Health Nutr. 2008; 1-6 26 Stookey et al. Obesity 2008; 10: 1038-1045 27 McNaughton et al. Diabetes Care. 2008; 31, 1343-1348 28 Schulze et al. Am J Clin Nutr. 2005; 82, 675-684; quiz 714-675 29Paynter et al. Am J Epidemiol. 2006; 164, 1075-1084 30 Montonen et al. J Nutr. 2007; 137, 1447-1454 31 Bazzano et al. Diabetes Care. 2008; 31, 1311-1317 32 Palmer et al. Arch Intern Med. 2008; 168, 1487-1492 33 Yoo et al. Am J Clin Nutr. 2004; 80, 841-848 34 Davis et al. Am J Clin Nutr. 2005; 82, 1004-1010 35 Ventura et al. Pediatrics. 2006 ; 118, 2434-2442 36 Dhingra et al. Circulation. 2007; 116, 480-488 37 Lutsey et al. Hum Exp Toxicol. 1994; 13, 393-399

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
EUROPEAN FEDERATION OF BOTTLED WATER	6. Key data on which to base recommendations for water intake	Section 6.5, Children and adolescents, line 1162-1163 EFBW would recommend indicating "This can best be amended by increasing the intake of preferably water: natural mineral water, spring water and drinking water" instead of "This can best be amended by increasing the intake of preferably energy-free beverages (tap or mineral water)".
EUROPEAN FEDERATION OF BOTTLED WATER	6. Key data on which to base recommendations for water intake	Section 6.6, Adults, line 1181 EFBW would ask EFSA to make clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p
EUROPEAN FEDERATION OF BOTTLED WATER	6. Key data on which to base recommendations for water intake	Section 6.6, Adults, line 1182 EFBW would recommend indicating "… be provided preferably by water: natural mineral water, spring water and drinking water and other beverages that usually contribute up to 80% of the intake of total water…" instead of "… be provided by beverages of all types and that beverages usually contribute up to 80% of the intake of total water…
EUROPEAN FEDERATION OF BOTTLED WATER	Conclusions	Conclusion, page 40, line 1223 Even if all fluids contribute to water intake, they can not be considered equally to satisfy water ADI's. Natural mineral water, spring water and drinking water should be promoted as the preferential healthiest fluid to satisfy the water needs. EFBW would consequently suggest to clearly indicate in the following form "the Panel has decided that the reference values for water intake should include water from beverages, preferably water: natural mineral water, spring water and drinking water, and from food moisture" instead of "the Panel has decided that the reference values for water intake should include water from beverages of all kind, including drinking and mineral water, and from food moisture".

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
KTL	1. Introduction	In the summary, on line 58 the expression concerning the adequate total water intake for the elderly might be expressed more clearly. E.g. "The panel defines the same adequate intake for the elderly as for adults, i.e. a higher water volume per energy unit. The decreasing of renal concentration capacity increases the physiological need of water. Also, thirst is decreasing with age causing easily a decrease in total water consumption." The point is important.
KTL	2. Definition/category	Line 482. In chapter 2.6. starting from line 482. Urinary volume of adults in cross-sectional studies has increased 30% (from 1.5 l/d to 2 l/d) in twenty years in Finland (Laatikainen, Pietinen, Valsta et al. Eur J Clin Nutr 2006).
KTL	3. Intake data	Line 763. In chapter 3.2. line 763. We can add the results of water intake in adults in Finland. The drinking of water was 5.6 dl/d in men and 8 dl/d in women (FINDIET2007). The drinking of other fluids (excluding milk but including alcohol beverages) was 10,6 dl/d in men and 6,8 dl/d in women. Ref The National FINDIET 2007 Survey. Eds: Paturi M, Tapanainen H, Reinivuo H, Pietinen P. Publications of the National Public Health Institute B23/2008 (KTL). http://www.ktl.fi/attachments/suomi/julkaisut/julkaisusarja_b/2008/2008b23.pdf In Nordic Nutrition Recommendation the total daily requirement for water was estimated to be 30 ml/kg (body weight). Line 833. We announce that National Nutrition Council published in 2008 special guidelines for selection of daily drinks and beverages in Finland (Valsta et al.).
NESTLE WATERS MANAGMENT & TECHNOLOGY	1. Introduction	Introduction, page 6, line 183 NWMT fully supports EFSA Panel: "water was not specifically mentioned in the terms of reference provided by EC… water should be included in the task because water and adequate hydration of the body is essential for health and life".

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
NESTLE WATERS MANAGMENT & TECHNOLOGY	1. Introduction	Summary, page 1, line 16 The Panel indicated that water intake should include water from beverages, drinking water, moisture content of food and water produced by oxidative processes in the body. This approach should be supported as most fluids are mainly composed of water and therefore contribute to water intake. However, the extent to which different kinds of beverages can contribute to hydration is still debatable. If all fluids contribute to water intake, they can not be considered equally to satisfy water ADI's" and consequently natural mineral water, spring water and drinking water should be promoted as the preferential healthiest fluid to satisfy the water needs instead of sugar sweetened beverages. Therefore, NWMT would recommend indicating "Water is consumed from different sources, which include preferably water (natural mineral water, spring water and drinking water), beverages, moisture content of foods, and water produced by oxidative processes in the body" instead of "Water is consumed from different sources, which include beverages, drinking water, moisture content of foods, and water produced by oxidative processes in the body"
NESTLE WATERS MANAGMENT & TECHNOLOGY	1. Introduction	Summary, page 2, line 38-39 NWMT would recommend indicating "…the reference values for total water intake should include water from beverages, preferably water: natural mineral water, spring water and drinking water and from food moisture" instead of "…the reference values for total water intake should include water from beverages of all kind, including drinking and mineral water, and from food moisture"
NESTLE WATERS MANAGMENT & TECHNOLOGY	1. Introduction	Summary, page 2, line 57 NWMT would ask EFSA to make clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
NESTLE WATERS MANAGMENT & TECHNOLOGY	2. Definition/category	Section 2 Definition, page 6, line 197 NWMT would ask EFSA to include a paragraph on water that makes clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p
NESTLE WATERS MANAGMENT & TECHNOLOGY	3. Intake data	Section 3.2 Dietary intake, page 21, line 747 NWMT supports this work aims at defining ADI's (Adequate Daily Intake) of water for different groups of population.

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Line 809 Belgium. NWMT suggests adding: * CSH-Belgium highlighted that "in our temperate climate, it is enough to drink 1.5 liters of water per day" https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/ABOUTUS1_MENU/INSTITUTIONSAPPARENTEES1_MENU/ HOGEGEZONDHEIDSRAAD1_MENU/MEDEDELINGEN1_MENU/MEDEDELINGEN1_DOCS/CSH%207145-2%20_BROCHURE_RECOMMANDATIONS_NUTR_2006_FR.PDF * PNNS-Belgium precised that "water is the lonely beverage which is really essential" https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/MIJNGEZONDHEID1_MENU/PRODUITSDECONSOMMATION1_MENU/ ALIMENTATION1_MENU/PLANNUTRITIONSANTE1_MENU/ALIMENTATIONSAINE1_MENU/ALIMENTATIONSAINE1_DOCS/GUIDE_GENERAL.PDF * Belgium National Nutritional and Health Plan (2005-2010) highlighted that "water is not only a vital nutrient, it is also the lonely beverage which is physiologically essential", as well as "water must be proposed as the first choice of beverage, especially for young children". https://portal.health.fgov.be/pls/portal/docs/PAGE/INTERNET_PG/HOMEPAGE_MENU/MIJNGEZONDHEID1_MENU/PRODUITSDECONSOMMATION1_MENU/ ALIMENTATION1_MENU/ALIMENTATION1_DOCS/TEXTE%20SCIENTIFIQUE%20PNNS_0.PDF
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Line 814 Germany: NWMT proposes adding: * German Food and Agriculture Authority (Baden-Württemberg) underlined that "not all beverages can be recommended for children. The ideal is drinking or mineral water" http://www.mlr.baden-wuerttemberg.de/Staatssekretaerin_Friedlinde_Gurr_Hirsch_MdL_Eine_ausreichende_Fluessigkeitszufuhr_erhaelt_die_Konzentrationsfaehigkeit_von_Schulkindern/27550.html

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Line 823 France: NWMT suggests adding: * AFSSA highlighted that: "water is the lonely beverage absolutely vital for our body" A. Martin. Apports nutritionnels conseillés pour la population française. Ed. TEC&DOC, 3ème, 2001 * PNNS-France underlined that: "the beverage that your body prefers is water", "during lunch and dinner, the beverage is water, only water", "warning!: the sugar in sugar sweetened beverages does not calm the appetite and let easily increase weight" http://www.mangerbouger.fr/menu-secondaire/manger-mieux-c-est-possible/les-9-reperes-essentiels/eau-a-volonte.html * EPODE-France precised that:"it is necessary that the main source of daily hydration is water, as it is part of a balanced diet", "water is the lonely original and universal beverage", "drink water without moderation", "the essential gesture: water by nature" http://www.epode.fr/pdf/communiques/cpeau.pdf * "only water is essential" Chevalier L. Nutrition: principes et conseils. Paris: Masson Ed. 2, 2005, 260p
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Line 834 NL: NWMT suggests adding: * Voedings centrum highlighted that: "research showed that the over-consumption of soft drinks and fruit juices increases the chance of overweight. Therefore do not drink too many of this kind of beverages. Pay attention to portion size. Cans and bottles of soft drinks become larger and larger and can be easily drunk" http://www.voedingscentrum.nl/Voedingscentrum/Templates/Pagina.aspx?NRMODE=Published&NRNODEGUID=%7bED984A9B-05E2-43F8-9355-DBA7D5212A2C%7d&NRORIGINALURL=%2fEtenEnGezondheid%2fGezond%2beten%2fVakken%2bSchijf%2bvan%2bVijf%2fvak%2b5_%2bdranken%2f&NRCACHEHINT
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Line 857 NWMT suggests to review data from UK: * Food Standard Agency highlighted that: "water is the best choice for quenching your thirst", "one of the 8 tips for eating well: drink plenty of water" http://www.eatwell.gov.uk/healthydiet/nutritionessentials/drinks/drinkingenough/?lang=en "Fizzy drinks, squashes and juice drinks contain lots of sugar – which means they contain a lot of calories- and very few nutrients. So try to keep these to a minimum. The added sugar they contain can also damage teeth. Drinking fewer sugary drinks

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		is a good way to reduce your energy intake, because you won't be missing out on any nutrients by cutting down on them. This will also be good news for you teeth. Research shows that children and young people in the UK eat too much sugar, and more of it comes from fizzy drinks that any other type of food or drink. Children who have lots of sugary drinks, such as fizzy drinks and squashes, are more likely to be overweight and to put on weight" http://www.eatwell.gov.uk/healthydiet/nutritionessentials/drinks/waterandsoftdrinks/?lang=en NWMT suggests to review data from Italy: * INRAN (Instituto Nazionale di Ricerca per gli alimenti e la Nutrizione) highlighted that "water balance needs to be maintained essentially with drinking or bottled water" * INRAN also precised that" other beverages need to be consumed with moderation", "drink plenty of water during the day" http://www.inran.it/INRAN_LineeGuida.pdf NWMT suggests to review data from Spain: * Ministry of Health through NAOS program highlighted that: "water: an essential beverage", "water is a vital beverage to maintain a balanced diet", to To control children's consumption of sugar sweetened beverages will help to have a healthy diet, as it is important that children are thirsty of water" http://www.naos.aesan.msc.es/naos/ficheros/investigacion/Come_sano_y_muevete.pdf * Ministry of Health through NAOS program precised that "avoid excessive consumption of sugar sweetened beverages and juices with sugar added. The studies have shown a relation between excessive consumption of these beverages and the increase of children obesity. Do not use them as a substitute of water" http://www.naos.aesan.msc.es/csym/nutricion_saludable/recomendaciones/recomendacion00004.html
NESTLE WATERS MANAGMENT & TECHNOLOGY	4. Overview on available dietary recommendations	Section 4, Overview on available dietary recommendations, pages 25-26 In addition to the compilation of available data from different countries, NWMT suggests to include a compilation of nutritional recommendations already applied by several European countries to promote natural mineral water, spring water and drinking water as a preferential source of water instead of other kinds of beverages.
NESTLE WATERS MANAGMENT & TECHNOLOGY	5. Criteria (endpoints) on which to base recommendations for water intake	Section 5.1.2.1., Dietary factors, pages 34-35, line 978 NWMT suggests adding the beverages that contain just water are: natural mineral water, spring water and drinking water. Other beverages bring not only water to the body, but also additional ingredients that have good or side effects depending on the intake level. Despite some debates still going on, the work done by the scientific community on health consequence of high intakes of sugars in the form of sugar sweetened beverages tends to become massive. From the late 90's until mid-2008 there are more than 150 publications on this subject with 90 publications only during the period from 2007 until mid-2008. The positive relation between the high

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		consumption of these drinks and over-weight, obesity, diabetes, insulin resistance and metabolic syndrome can not be ignored. This has been clearly shown on populations which are heavy consumers like in the USA and Mexico. This has driven the US scientific community to develop a beverage guidance system (Popkin et al. 2006). There is today a growing number of high quality results available on this topic that NWMT would like to recall and highlight. NWMT would recommend to consider the case of sugar in the form of sugar sweetened beverages, when consumed in excess, for their effects on energy intake, overweight, obesity since obesity increases the risk of numerous diseases including diabetes and cardiovascular diseases (WHO, 2007). This should be considered particularly for very sensitive or exposed groups of populations like children and adolescents. In children and adolescents, despite existing controversial results from observational studies, the relation between the high intakes of sugar in form of sugar sweetened beverages and excessive weight gain or the risk of obesity has been shown by many authors (Ludwig et al. 2001, Dennison et al. 1997, Forshee et al. 2003, Gillis et al. 2003, Apovian, C.M. 2004, Ariza et al. 2004, Berkey et al. 2004, Phillips et al. 2004, Nicklas et al. 2004, Welsh et al. 2005, Malik et al. 2006, O"Connor et al. 2006, Striegel-Moore et al. 2006, Tam et al. 2006, Warner et al. 2006, Dubois et al. 2007, Ochoa et al. 2007, Sanigorski et al. 2007, Libuda et al. 2008, Forshee et al. 2008) and recent interventional studies (Ebbeling et al. 2006, Taylor et al. 2007, Sichieri et al. 2008). These results showed also that reducing sugar added beverage is an efficient strategy to reduce excessive BMI in children. This possibility has also been demonstrated in adult women. More recently (Stookey et al. 2008) it has been demonstrated that replacing caloric sweetened beverages by drinking water is reducing the energy intake and as a consequence, helps to lose weight. The association between high intakes of sugars in the form of sugar sweetened beverages and weight gain in adults has also been clearly established. Obesity, together with a lack of physical activity and aging of the population, is among the main risk factors for diabetes. Diabetes itself is an important cause of morbidity and a major risk factor of cardiovascular diseases (McNaughton et al. 2008). The positive relation between high intakes of sugars in the form of sugar sweetened beverages and occurrence of diabetes has been well documented through observational studies (Schulze et al. 2005, Paynter et al. 2006, Montonen et al. 2007, Bazzano et al. 2008, Palmer et al. 2008). Furthermore, the observational studies conducted by several authors, despite some discrepancies in results tend to show positive relation between sugar sweetened beverages and insulin resistance as well as metabolic syndrome (Yoo et al. 2004, Davis et al. 2005, Ventura et al. 2006, Dhingra et al. 2007, Lutsey et al. 1994).

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
NESTLE WATERS MANAGMENT & TECHNOLOGY	6. Key data on which to base recommendations for water intake	Section 6.5, Children and adolescents, line 1162-1163 NWMT would recommend indicating "This can best be amended by increasing the intake of preferably water: natural mineral water, spring water and drinking water" instead of "This can best be amended by increasing the intake of preferably energy-free beverages (tap or mineral water)".
NESTLE WATERS MANAGMENT & TECHNOLOGY	6. Key data on which to base recommendations for water intake	Section 6.6, Adults, line 1181 NWMT would ask EFSA to make clearly the difference between water from foods and water from beverages, in order to make dietary guidelines more relevant for consumers as proposed by the Institute of Medicine in the US in 2005 and 2006 through the setting of DRIs [Dietary Reference Intakes) for water] Dietary references Intakes for water, potassium, sodium, chloride and sulphate. Institute of Medicine of the national Academies, 2005, 617p Dietary Reference Intakes – The essential guide to Nutrient requirements – Institute of medicine of the National Academies, 2006, 543p
NESTLE WATERS MANAGMENT & TECHNOLOGY	6. Key data on which to base recommendations for water intake	Section 6.6, Adults, line 1182 NWMT would recommend indicating "… be provided preferably by water: natural mineral water, spring water and drinking water and other beverages that usually contribute up to 80% of the intake of total water… " instead of "… be provided by beverages of all types and that beverages usually contribute up to 80% of the intake of total water…
NESTLE WATERS MANAGMENT & TECHNOLOGY	Conclusions	Conclusion, page 40, line 1223 Even if all fluids contribute to water intake, they can not be considered equally to satisfy water ADI's. Natural mineral water, spring water and drinking water should be promoted as the preferential healthiest fluid to satisfy the water needs considering the scientific facts as described in section 5.1.2.1. NWMT would consequently suggest to clearly indicate in the following form "the Panel has decided that the reference values for water intake should include water from beverages, preferably water: natural mineral water, spring water and drinking water, and from food moisture" instead of "the Panel has decided that the reference values for water intake should include water from beverages of all kind, including drinking and mineral water, and from food moisture".

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
UNESDA - Union of European Beverages Associations	1. Introduction	Page 6 (Line 184) UNESDA entirely agrees with EFSA that although water was not specifically mentioned in the terms of reference provided by the EC to review the 1992 SCF report on nutrient and energy intake, water should be included in the task undertaken by the Panel, because water and adequate hydration of the body is essential for health and life. Water is of course, consumed from and via various sources, including beverages, drinking water, moisture content of foods, as well as the water produced by oxidative processes in the body.
UNESDA - Union of European Beverages Associations	3. Intake data	Page 21 (Line 746) The draft states that"Data on water intake in European countries are unfortunately often not comparable because of differences in assessment and differences in the categorisation of beverages and liquid foods like milk". UNESDA suggests that it could be considered using data from UK National Dietary Survey studies, if available, to estimate the origin of the consumed beverages.
UNESDA - Union of European Beverages Associations	5. Criteria (endpoints) on which to base recommendations for water intake	Page 34 (Line 1003) UNESDA suggests referencing in this section one of the most extensive reviews on caffeine and hydration made by Maughan and Griffin (2003). Authors concluded that the most "ecologically valid" of the published studies offers no support for the suggestion that consumption of caffeine-containing beverages as part of a normal lifestyle leads to fluid loss in excess of the volume ingested, or is associated with poor hydration status. Therefore, there would appear to be no clear basis for refraining from caffeine-containing drinks in situations where fluid balance might be compromised. Research now shows that coffee, tea, and other caffeine-containing beverages do not increase urine output or negatively affect indicators of hydration status in those who are accustomed to consuming caffeine (Grandjean et al. 2000; Armstrong 2002). 1. Maughan RJ, Griffin J. Caffeine ingestion and fluid balance: a review. J Hum Nutr Dietet 2003; 16: 411–420. 2. Armstrong LE. Caffeine, body fluid-electrolyte balance, and exercise performance. Int J Sport Nutr Exerc Metab 2002;12:189–206. 3. Grandjean AC, Reimers KJ, Bannick KE, Haven MC. The effect of caffeinated, non-caffeinated, caloric and non-caloric beverages on hydration. J Am Coll Nutr 2000;19:591–600.

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
UNESDA - Union of European Beverages Associations	6. Key data on which to base recommendations for water intake	Page 38 (Line 1135) Observational data in healthy population groups: Children, especially infants and toddlers, are at greater risk of dehydration than are adults. Older adults can have impairments in renal-concentrating, sodium-conserving ability, and thirst, and may limit fluid intake, all of which can contribute to an increased risk of dehydration and hypernatremia. Another vulnerable collective are physically active people. It is well known that the ingestion of plain water post-exercise results in a rapid fall in plasma osmolality and plasma sodium concentration(1). This reduces the stimulus to drink (thirst) and stimulates urine output before sufficient fluid has been consumed to restore plasma volume(2). High temperatures combined with exercise that continues for periods longer than four hours may result in hyponatremia in susceptible individuals. 1. Wemple RD, Morocco TS, Mack GW. Influence of Sodium Replacement on Fluid Ingestion Following Exercise-Induced Dehydration. International Journal of Sport Nutrition 1997; 7: 104-116. 2. Nose H, Mack GW, Shi X, Nadel ER. Role of osmolality and plasma volume during rehydration in humans. Journal of Applied Physiology 1988; 65:325-331 As stated in this EFSA opinion for dietary reference for water, “Fluid is consumed in the form of food and beverages”, and regardless of form, is absorbed by the gastrointestinal tract and acts the same physiologically. The pertinent information therefore is not the source of the water, but the amount of water in a food or beverage, and the amount of each that a person consumes. Fluid consumption is as much, if not more, of a behaviour as it is a response to thirst, and thirst is triggered by both physiological and perceptual mechanisms. Research indicates there are three main physiological triggers for thirst: Cerebral osmoreceptors, extra cerebral osmoreceptors, and volume receptors. Osmoreceptors respond to cellular dehydration, while volume receptors respond to extracellular dehydration. While the need for water is biological, beverage selection is influenced by several factors. Sensory attributes such as colour, flavour, odour, and texture determine the palatability of a beverage. Appearance and temperature also affect consumption, as does availability. It has been shown that when there is a large choice for drinks, hydration is better accomplished especially in children, elderly and physically active people. 1. Grandjean AC, Campbell SM. Hydration: Fluids for Life. ILSI North America Monograph Series 2004. 2. Simmons SF, Alessi C, Schnelle JF. An intervention to increase fluid intake in nursing home residents: prompting and preference compliance. J Am Geriatr Soc. 2001 Jul;49(7):926-33. 3. Davidhizar R, Dunn CL, Hart AN. A review of the literature on how important water is to the world"s elderly population. Int Nurs Rev. 2004 Sep;51(3):159-66; Page 38 (Line 1162-63)

ORGANISATION	CHAPTER TEXT	COMMENT TEXT
		UNESDA would suggest replacing “This can best be amended by increasing the intake of preferably energy-free beverages (tap or mineral water)” by “This can best be amended by increasing the intake of preferably energy-free beverages (tap or mineral water or non-caloric beverages).” Page 39 Section 6. Key data on which to base recommendations for water intake UNESDA would suggest including a paragraph on "Involvement in intense muscular activity, particularly sports people". Several studies have reported that individuals do not voluntarily replace all of the water lost due to sweating in heat or a combination of exercise and thermal stress even when sufficient water is readily available. The addition of flavour, glucose, electrolytes - in particular sodium - can reduce this “involuntary dehydration”. A number of position statements support the role of fluid replacement in sports and exercise NOTE: SCIENTIFIC REFERENCES WILL BE FORWARDED DIRECTLY TO EFSA